

CS2311 Practice Exercise – Branching / Conditional Execution

In this exercise, you will write a program to check whether a given date is valid, based on the three inputted integers (representing day, month and year respectively).

A date is valid if the month is in range [1..12] and the day is no greater than the limit of the corresponding month (*e.g. no greater than 31 for January*). We do not consider B.C. in this exercise, so a valid year number should be greater than zero.

Also in this exercise, you need to consider ***leap years***, which contain 29 days in February. A year is a leap year if it is 4's multiple but not 100's multiple (e.g. 2012, which is 4's multiple, is a leap year; but 2100, which is 100's multiple, is not leap year). One important exception to the above rule is that 400's multiple is also considered as leap year. (As such, 2100, 2200, and 2300 are not leap years, but 2400, which is 400's multiple, is a leap year).

The program should output the date in DD-MM-YYYY format.

You may refer to the followings for the precise format: (*input underlined*)

Input the day, month and year: <u>1</u> <u>1</u> <u>2013</u> 01-01-2013 is a valid date
Input the day, month and year: <u>32</u> <u>13</u> <u>2014</u> 32-13-2014 is not a valid date
Input the day, month and year: <u>29</u> <u>2</u> <u>2012</u> 29-02-2012 is a valid date
Input the day, month and year: <u>29</u> <u>2</u> <u>2014</u> 29-02-2014 is not a valid date
Input the day, month and year: <u>0</u> <u>0</u> <u>0</u> 00-00-0000 is not a valid date